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*Creating technological solutions
to meet members' needs — from forest to market*



Annual Report | 2002 - 2003

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Forintek's mission is to be the leading force in the technological advancement of the Canadian wood products industry, through the creation and implementation of innovative concepts, processes, products and education programs.

Chairman's Message



Richard Bélanger
Board Chair

Over time, Forintek has earned a reputation for its work in the trenches, its collaborative approach and its ability to respond proactively to industry needs. This past year was certainly no different.

In the past months, Canadian and American negotiators made little headway towards a quick and fair resolution to the softwood lumber dispute. The dispute resolution processes within the World Trade Organization and NAFTA are painfully slow, and markets have been increasingly difficult, particularly given the rising value of the Canadian dollar against US currency. Yet amidst these challenging times, Forintek managed to remain focussed on the big picture and to continue to spark innovation, grow the global wood product market, leverage R&D funding and maximize benefits for all members.

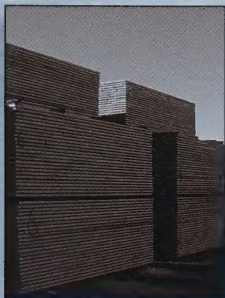
As part of this year's priorities, a Task Force representing industry and government spent significant effort to assess current challenges and opportunities for the three Canadian forest-related research Institutes – Paprican, Feric and Forintek. This was part of a strong drive to review the foundations of the Institutes, to improve efficiencies and contain costs. The reality is that government is changing the way it allocates research funding and the trend is to concentrate on opportunity sectors – ones that are likely to be strongly innovative. There is also a clearly expressed desire from several larger companies to have the Institutes review their cost structures so that they better reflect industry consolidation. If these issues are not addressed efficiently, we could see a trend for less

collective and more proprietary research. These challenges are very real and the long-term future of the Institutes is at stake.

At this point, I want to highlight the commitment from the Task Force members and underscore particularly the leadership and positive contribution from my colleagues on the Forintek Board and senior management. Once again, Forintek has demonstrated its capacity to listen, adapt and look for win-win solutions.

From the analysis carried out this year, the onus is now on the Institutes' members, from industry and government, from smaller companies to larger companies, to develop a forest sector-wide strategy for R&D and to strike the appropriate balance between investment and research benefits, while respecting the specific needs of each member. We must also use this momentum to aggressively enhance the development of human capital in order to build R&D capacity in Canada. Close collaboration with universities is certainly a key element. I can only hope that as wood product manufacturers, we will all stand up and be counted in these important discussions.

Over the past year, Forintek's proactive approach has also continued to work in addressing the marketing and manufacturing challenges facing the Canadian forest industry – proving that connectivity is just as powerful between industry, government and regulatory bodies, as it is between machine centres in our mills.



Forintek's proactive approach also continued to work in addressing the marketing and manufacturing challenges facing the Canadian forest industry.

One example is Forintek's deep-rooted work that continues to pay dividends in such important markets as China, Japan and Taiwan. New inroads are also being made into Korea and India. In many of these countries, Forintek's contribution towards achieving greater acceptance of wood platform-frame building construction based on North American codes and standards is nothing short of remarkable. Behind these efforts is a profound conviction, on the part of Forintek's Board, management and staff, that there is room to *grow the pie* for wood products, not just in North America but around the world. Our role will continue to be fundamental in helping Canadian manufacturers capitalize on these significant opportunities.

Another key example is linked to the federal government's \$75 million commitment for three initiatives designed to support the Canadian forest industry. On this point, I'd like to draw your attention to the President's Message. Innovation and market access for Canadian wood products are at the core of these initiatives, and match well with Forintek's top priorities. We are fully committed to using the funds allocated to enhance industry's competitiveness through leading-edge research and accelerated technology transfer.

Times are tough for Canadian wood product manufacturers and most segments of our industry are hurting. In my view, our best defense remains offense – through innovation and smart market strategies.

Using the special attributes of Canadian-grown wood species, we must produce more efficiently and create new products that increase not only value but profit margins. We also need to diversify our markets and grow global use by building on the unique attributes of wood products as ultimate sustainable materials of choice for consumers.



Again this year, Forintek's vision and hard work has proven its relevance over and over. In a clear show of support for the organization's direction, the membership has remained stable at about 185 members, including seven provinces. Membership losses were offset through recruitment of twenty new members.

I have enjoyed this opportunity to work as your Board Chairman for the last two years. I look forward to the unfolding of the many programs and initiatives we have set in motion, in particular as they pertain to the financial sustainability of Forintek. I also wish to extend my warmest thanks to all members of the Executive Committee and the Board, as well as to Ian, Jean-Claude, Jim and all their staff for truly outstanding contributions.

Richard Bélanger
Board Chair

President's Message



Ian de la Roche
President and CEO

Recent events have demonstrated unequivocally that the profile of Forintek's partnership is at an all time high in government and industry.

For example, the announcement by the federal government in May, 2002 to make a sizeable investment of \$75 million over the next three to five years for three specific forestry initiatives has exciting implications for Forintek's membership. As more details unfolded over the past year, it became obvious that we would be playing a strong leadership role in helping the federal government meet its objectives under the program.

Natural Resources Canada (NRCan) designated about \$30 million for the Canada Wood Export Program (CWEP), which is a major effort undertaken with industry associations and the provinces to expand Canada's sales to countries such as China, Taiwan, Korea and India. Forintek has already started to access this program to support our work on codes and standards in Japan, China, and Taiwan, with plans to expand our efforts into the emerging markets of Korea and India.

Secondly, the three national forest research institutes—Forintek, FERIC and Paprican—received additional funding from NRCan for research and development activities to strengthen the industry's competitive position. We drew on these funds this year to strengthen our National Research Program (NRP) and to offset any revenue losses resulting from the U.S. countervail actions. Our NRP budget for 2002/03 was \$13 million, plus \$1.5 million for equipment.

Finally, \$15 million per year for the next five years has been allocated by NRCan for the National Value-added Initiative for Wood (*Value to Wood*) for the value-added wood products industry. Two-thirds of the funds are directed to Forintek for research and technology transfer, while one-third supports research at four Canadian universities. These funds will support both fundamental and applied research to help secondary manufacturers improve their competitiveness, develop new products and applications, and move up the value-added chain.

We recognize that as information and new technology becomes available through this new investment as well as from on-going Forintek programs, we need to be as responsive as possible to our membership. Forintek continues to streamline access to our databases, software, and personnel.

Over the past year, it has become clear that our 'carbon taxed' world is here to stay. So a major thrust within our strategic goal of achieving excellence in knowledge and technology has been to investigate how our members can improve their drying, efficiency and techniques. Forintek's research shows that by focussing on improvements and innovations in this area, our panel and lumber producing members could witness a major impact on production cost and product quality.

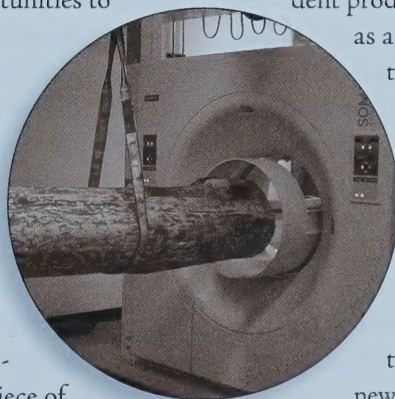
A sizeable investment of \$75 million from Natural Resources Canada over the next three to five years for three specific forestry initiatives has exciting implications for Forintek's membership.



The input from Forintek members who participate in our Technical Advisory Committees (TACs) has once again been invaluable to advancing existing research and launching new projects in keeping with the priorities as set out in our Strategic Plan. We continue to spend considerable time maintaining open communication between our industry and provincial partners to ensure that they are aware of Forintek's ongoing activities, what services we can provide, as well as providing them with numerous opportunities to give us feedback.

At this time, I wish to present some highlights from last year's research program.

- Both our Western and Eastern Computed Tomography (CT) scanners are now in full operation. Completion of the Vancouver CT Imaging Center this year was the final piece of the puzzle, with financial support coming from membership contributions, Canada Foundation for Innovation and the BC Knowledge Development Fund. The Eastern scanner was installed in 2001 at the *Institut national de recherche scientifique* (INRS) in Sainte-Foy, Quebec. The CT scanners' 'through-the-log' viewing capability complements current log scanners that provide information based on external characteristics. The CT scanner also provides information useful in studying process behaviors in lumber drying and composite board manufacturing.



- Development of 'Smart Mill Assistant' as part of our Total Process Control (TPC) initiative for optimizing sawmill operations took a quantum leap forward recently. Forintek, Precarn Associates, Tembec, and Comact Optimisation have agreed to collaborate on developing this important system. This is a good example of our partnership approach in action. Smart Mill Assistant will allow lumber manufacturers to monitor and control all independent production steps in an integrated fashion, as a means to optimize the inevitable trade-offs between wood conversion efficiency, mill productivity and production bottlenecks. A total of \$2.7 million over three years has been allocated to this R&D effort.

- Over the past year, our veneer drying laboratory research capabilities have improved substantially with new equipment installations and software development related to both longitudinal and cross-flow jet drying conditions. Firstly, we designed and built a mini-dryer to study the basic parameters of veneer drying. We also installed a pilot scale dryer, which allows us to simulate actual industrial drying conditions. In tandem with these dryer installations, two computer simulation models were further developed and used for staff training and dryer modifications. Staff also studied, developed, and provided members with information related to optimal veneer drying parameters based on data collected from field audits and evaluations.



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research and development, and technology
transfer function for our members.*

- As part of our \$3 million, three-year (*ElectroBois*) collaboration with the Quebec Ministry of Natural Resources, and Hydro-Québec's *Laboratoire des technologies électrochimiques et des électrotechnologies* (LTEE), a new radiofrequency vacuum kiln was installed at the LTEE facility in Shawinigan, Quebec. This five cubic metre kiln holds two Mbf of lumber up to 17 feet (5m) in length. The purpose of this collaboration is to accelerate the development of electricity-based techniques for the wood products industry.
- A major marketing initiative undertaken across the Prairie provinces, with funding support from Western Economic Diversification Canada (WED), had our staff conducting a more detailed assessment of the marketing potential of aspen lumber. Based on very positive response from Japanese manufacturers to high-end aspen lumber samples shown to them during a recent Forintek fact-finding mission, Japanese manufacturers will be offered a larger amount of Western aspen lumber to use in their manufacturing processes. Information gathered during the fact-finding mission has been shared with aspen lumber producers, particularly in Alberta.
- The three Forintek staff members at Saskatchewan's Forest Centre provided a series of workshops aimed at both the province's primary and value-added wood products' manufacturing sectors. A two-day sawmilling workshop in Prince Albert covered topics such as proper saw filing, sawmill alignment, appropriate air and kiln drying specific to hardwoods, value-added opportunities in component manufacturing, pre-fab and log home manufacturing, and market opportunities for aspen. Workshop participants were also introduced to our Video Tooth

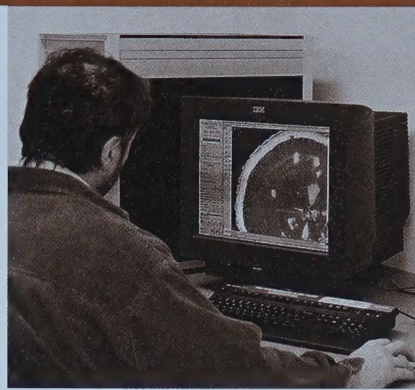
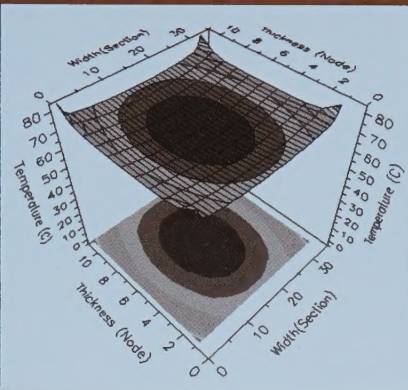
Inspector (VTI™) software, and staff demonstrated its use. Following this workshop, it was decided to proceed with a series of mini-seminars on specific topics aimed at specific producers. Over the past year, staff members have also assisted other agencies by giving presentations on global markets for wood products, and hardwood markets in particular.

Forintek has set a number of initiatives in motion, as should be expected of us during these challenging times. We perform an important market intelligence, research and development, and technology transfer function for our members. As I have said before, the Forintek partnership makes good business sense and I have no doubt that, as we move on, those who have shared the risks and the costs will share growing benefits.

Forintek's future looks positive, partly due to our emphasis on financial sustainability and application of effective business processes. Over the past year, we have exercised strict cost control, keeping costs within budget. We also seek cost recovery and increased revenue whenever and wherever possible.

My thanks to our staff for their commitment to innovation and members service, to the leadership provided by the Board, and to Board Chairman Richard Bélanger for the high profile that he has helped us to maintain over the past year.

Ian de la Roche
President and CEO



Whether it's solving a technical problem, investigating the possibility of expanding a product line, or launching a new wood product venture, Forintek has the proven technical and marketing expertise to point our members and the Canadian industry in the right direction.

In addition to technical expertise, it is critical to have the proper tools to conduct the scientific research often needed to address a specific technical concern, to test a theory on how to improve a production process, or to validate the specific properties of finished wood products. At Forintek, we now have access to two computed tomography (CT) scanners. These will open up many more possibilities for advanced wood product research and development. Our consortium with the Alberta Research Council represents the largest and best-equipped wood composites research group in North America. Forintek and ARC are equipped with modern pilot plants and product testing facilities. We also operate the only facility in North America for MDF research involving thermal and chemical wood modification.

From assessment of raw material to finding markets for finished wood products, Canada's forest industry has come to rely on the world-class expertise and facilities available at Forintek. Industry and government members' support for the organization has continued to be strong and positive.

In reality, it is Forintek's membership that is responsible to a great degree for our success. They provide the organization with general research directives through their participation on our Technical Advisory Committees, National Research Program Committee and the Board of Directors. Highlights of Forintek's research program over the past year are summarized in this Annual Report. For a detailed portrait of our research program, please refer to this report's companion document, *Progress and Achievements 2002-2003*.

Forintek's research program is divided into specific focus areas to reflect the needs of our diverse membership.



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This year, our Resource Assessment program continued to anchor Forintek's overall Strategic Plan to identify new opportunities for the forest products industry at every step of the supply chain. Our efforts to "Start Adding Value at the Resource" were boosted by the acquisition of leading-edge technology and the formation of new research alliances.

In collaboration with the University of Northern British Columbia, Forintek completed construction of a Computed Tomography (CT) Wood Imaging Centre in Vancouver. Built to our specifications, this facility is unique in the world. Thanks to it and to earlier access to the *Centre de scanographie* at the University of Quebec, cornerstones were put in place to help us integrate CT scanning with our goals to provide decision support for silvicultural practices and to improve fibre allocation optimization. By using a series of white spruce and subalpine fir CT images, we developed preliminary algorithms for identifying and displaying log shape, pith location, and the heartwood-sapwood boundary in 3D images for these species. We also started integrating these internal characteristics into Forintek's Optitek sawing simulator software so that the information may be used to grade logs, and optimize bucking and sawing solutions.

CT scanning technology and its 'through-the-log' viewing capabilities will ultimately improve the ability of woodlands managers to identify harvest sites that will likely yield higher recovery and higher grade forest products. It also has the potential to have a significant impact on silvicultural practices.

During the year, we put in place the format and defined the content and data collection protocols for a Canadian Fibre Database and CT Stem Bank. The database is organized to link wood properties to individual five metre logs; to link these logs to their parent trees; and to link trees with their stand of origin. CT images made of each five metre log comprise the stem bank. Users will be able to retrieve and analyze collections of wood property data for any desired set of stand, tree or log characteristics (for example biogeoclimatic zone, site index, species, age, dominance, position in the tree). Summary data on key internal log features (number and size of knots, pitch pockets, volume of sapwood, average wood density and so on) will be extracted from the CT images and stored on-line in the database. An index to an off-line catalogue of complete CT images for each log will give researchers access to the raw image data files for further research.

"Virtual trees" in this database will be used to map wood quality from selected stands, estimate value yield from those types of stands, evaluate alternative processing strategies for different types of timber, and provide forest managers with feedback on the impact of various management practices on timber quality.



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Forintek has partnered with a number of different organizations on research projects related specifically to jack pine. For example, we continue to participate in Ontario's Jack Pine Task Force. Its objective is to determine the impact of stand age on annual volume growth, resource characteristics, and product recovery. The expectation is that this type of information will help industry make informed decisions on rotation age. The project is also expected to identify value-added applications for jack pine. This year, Forintek scientists participated in a test conducted on jack pine stems which showed that tree length harvesting and handling could cause significant damage and value loss.

A detailed investigation of the difference between yellow and black spruce was conducted this year. Yellow spruce is a variety of black spruce that grows on poor and humid sites in Northern Quebec and Ontario. Our scientists found that tree diameters were 1.45 times larger for regular black spruce than for yellow spruce for 150-year old stems. Yellow spruce displayed a greater percentage of wet pockets and higher moisture content in butt logs. A kiln-drying strategy and schedule for yellow spruce lumber is being developed based on these findings.



Intensive silviculture and shorter rotations will contribute to a sustainable wood supply for the Canadian forest industry. However, many companies have come to realize that tree breeding programs conducted in some regions of Canada over the past few decades have focused primarily on improving tree growth. There comes a point when a more rapid rate of growth has a negative impact on strength properties, and strength properties are a critical component of determining the price of dimension lumber. Results of a study on plantation white spruce in Quebec, confirmed the need to consider the wood quality implications of stocking, spacing and thinning applications.

A study of wood density related to rate of growth in natural stands of white spruce in Alberta provided robust confirmation of results from a similar, but more comprehensive, study in British Columbia. These studies identified the margin at which increased growth rate becomes detrimental to the structural wood properties of rotation age boreal white spruce. During the past year, further geographic confirmation was obtained by extending sampling to two regions in Saskatchewan. Wood density is a key wood quality attribute, and thanks in large part to past contributions from wood scientists at Forintek, the need to consider it in tree improvement programs in Canada has been recognized for more than twenty years.

Composite Products Highlights



Forintek operates some of the most advanced research facilities in the world to assist our members to produce the highest quality composite products, with the most efficient manufacturing processes, lowest manufacturing costs, and the least environmental impact. These products are developed from veneer, strands, particles, or fibre.

Over the years, Forintek's partnership with the Alberta Research Council (ARC) has resulted in the development of a number of technical innovations and process improvements, particularly in the manufacture of oriented strandboard (OSB). This Forintek/ARC consortium is the largest and best-equipped wood composites research group in North America, with modern pilot plants and product testing facilities.

Very useful results were obtained from several long-term projects that were completed this year by the Consortium: OSB Variability Study; Improving OSB Shear Properties; and Modelling Drying Rates in Aspen Logs During Storage. New technology was transferred to industry throughout the duration of the OSB Variability Study: an x-ray system for measuring horizontal panel density; a laser-based system for measuring strand orientation; and an infra-red system for on-line measurement of panel density. The ability to effectively measure OSB process variability is key to improving process efficiency and product quality.

In addition, Forintek has been a leader in the development of scanning tools to aid OSB production. Over the past year, members have had an opportunity to see both Strand Alignment and Gauging Expert (SAGE) and GluScan in action. Both have been recommended for further development after a high level of interest shown at demonstration sites. SAGE is an on-line scanning system for measuring strand alignment. GluScan allows OSB plants to monitor adhesive distribution on OSB strands.

While conducting R&D on product and process improvements, Forintek also continues to study potentially new raw material sources. For example, the Forintek/ARC consortium has launched a new project called 'Low Density OSB from Low Density Hybrid Poplar', as a follow up to a completed project that evaluated the suitability of short-rotation hybrid poplar from various sources across Canada for the manufacture of OSB. Research conducted this year showed that hybrid larch, like hybrid poplar, could be used to extend the OSB industry's wood supply.

Updates on our VYield and Logcon composite products software programs were launched this year. Access to a number of our most popular software programs was improved. VYield 1.3 is used to predict veneer recovery and Logcon 4.0 helps to improve log conditioning before manufacturing. Its features include the ability to calculate the optimum conditioning temperature for all commercially-important veneer species, including aspen. It is equally effective for applications in plywood, laminated veneer lumber (LVL), and OSB.



Forintek operates some of the most advanced research facilities in the world to assist our members to produce the highest quality composite products.

On-line versions of Forintek's three most popular programs (VYield, Logcon, and Peeling) are now available. Written in Java format, the internet-based software provides all of the features previously distributed by diskettes.

Forintek scientists and technical support staff continue to respond to specific challenges faced within the various branches of the composite products sector. For example, in response to member requests, Forintek has identified standards and 'best practices' for the positioning of peeling knives in the manufacture of veneer.

During the last year of the project entitled, Optimization of Veneer Drying Processes, we further developed two computer simulation models called VDRY-J and VDRY-L. They are currently being used for staff training and drying optimization. This year we designed and installed two new laboratory dryers capable of simulating longitudinal dryers and cross-flow jet dryers. The new dryers will significantly enhance our ability to find solutions to help manufacturers increase drying productivity and decrease energy consumption.

A US Patent was filed for a novel method to measure dryer relative humidity. This completed project and new lab dryers present members with an opportunity to test and develop new dryer controls.

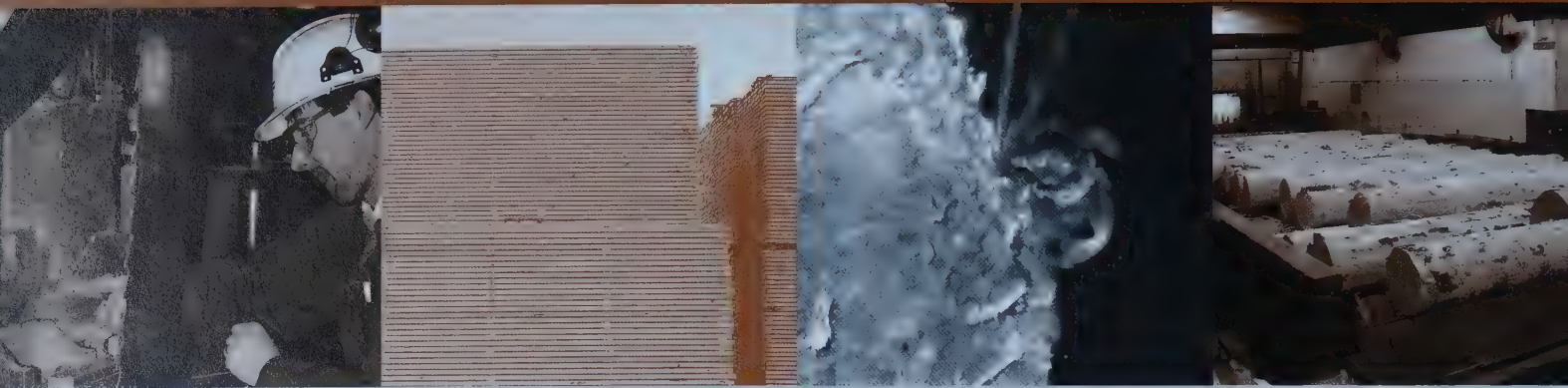
We operate the only facility in North America for MDF research involving thermal and chemical modification. Located at our Eastern Division laboratory

in Sainte-Foy, Quebec, scientists have been working on the development of a model for the optimization of on-line resin injection. The model will be used to calculate energy and mass balance during the refining process. Calculations of the steam flow will be used to estimate flow speed for the optimization of the blow-line configuration. Other research will investigate process variations that would lead to much-improved dimensional stability and moisture resistance.



The equipment used in the pilot plant also lends itself to environmental impact assessments. It has the capacity for on-line measurements of dust, condensates, greenhouse gases and other volatile organic compounds (VOCs) from fibre drying in relation to raw material characteristics, refining parameters, and resin properties. In fact, everything is in place for Forintek to develop information on emission factors from the drying process of lumber and composite panel plants.

Other research is now under way to develop a technology using bio-filters to capture and degrade VOCs emitted by composite plants. Bio-filters rely on micro-organisms such as bacteria and fungi on an organic support such as bark to convert VOCs into carbon dioxide. Forintek is working with another organization, CO2 Solution, to combine this process with a newly developed technology using enzymes to turn carbon dioxide into usable, and harmless, bicarbonate.



As part of our national Total Process Control (TPC) initiative, Forintek has entered into a partnership with Precarn Associates, Tembec, and Comact Optimisation to develop the 'Smart Mill Assistant'. This is another demonstration of how Forintek is leveraging its research by collaborating with other organizations, member companies and institutions. The Smart Mill Assistant (SMA) program is a \$2.7 million three-year project. It will allow lumber manufacturers to monitor and control all independent production steps in an integrated fashion, as a means to optimize the inevitable trade-offs between wood conversion efficiency, mill productivity and production bottlenecks. The objective is not to replace humans with computers. The deliverables will consist of models, databases, man/machine interfaces, communication protocols and hardware, and instrumentation. The SMA will provide information using feedback loops, on line and in real time to optimize operators' or supervisors' decisions. A prototype will be built by Comact and installed in a Tembec mill by March 2005.

Another aspect of Forintek's TPC initiative is to facilitate discussions between all major North American systems integrators, consultants and manufacturers of sawmill machine centres to help develop a common communication method between individual machine centres. Discussion continued over the past year, leading toward using the OPC standard as a common interface for communication between various devices controlling technological processes. OPC avoids dependence on individual hardware manufacturers, which makes it an ideal tool for TPC in sawmills.

A project also related to TPC involved developing and testing a commercial prototype of an accurate real-time rotation monitoring system. Forintek studies have shown that optimized log breakdown systems do not always produce optimum solutions. Costly errors commonly occur, resulting in lower value recovery. Therefore, the need for the development of a rotation monitoring system was obvious and a high priority with our members. Test results of a commercial prototype showed that an alternative method was needed to help improve accuracy of log rotation. The alternative approach was to develop a camera-based real-time machine vision system to measure and control log rotation by correlating consecutive 'pictures' of the log as it is being rotated. Development of this system is under way along with the necessary software. After successful mill trials of the equipment prototype and software, Forintek will make arrangements for commercial development.

The CT Imaging Centre in Vancouver, featuring our new industrial computed tomography (CT) scanner, became operational over this year, and complements another CT scanner located in Quebec and acquired by the University of Quebec and Forintek, with funding from the Canada Foundation for Innovation. Its 'through the log' viewing capability is already providing valuable information. Used in combination with scanners that provide information using external characteristics, the knowledge gained from this type of research will lead to sawing decisions related to knots and other defects that affect grade.



Forintek is leveraging its research by collaborating with other organizations, member companies and institutions.

Forintek has developed a new version of the Opti-tek software, which is used to analyze sawmilling operations and evaluate the impact of new technology, process modifications, or changes to a sawmill's wood supply. Although similar to its predecessor, the new version makes use of a different programming environment that will facilitate the continuing evolution of the program and its adaptation to new technology and member needs. Member feedback suggested that the program needed to be more user-friendly and flexible. Thanks to a radically new user interface, it will now be much easier to access data and analyze results. Beta versions are being tested internally before general release to members.



Three guides were produced this year that will help mill personnel calibrate key equipment and check performance. Our scientists developed the guides based on methods they have fine-tuned over many years of experience with diagnostic studies. These methods are based on scientific principles, yet are cost-effective. Their potential impact on value recovery has been amply demonstrated in industry.

Over the past year, in cooperation with UBC, staff have made considerable progress toward developing a quality control system to detect repetitive defects such as saw marks, washboarding, and spike marks in the lumber manufacturing process. At present, quality control systems that automate cant and lumber size

measurements do exist, but they suffer from false alarms and collect only thickness information. After overcoming initial problems with mill vibrations, the Forintek system proved capable of distinguishing between cants with and without machine defects. The system was fine-tuned to improve reliability and to incorporate mill-specific operating parameters. A third trial took place this spring. The final project phase involves the development of an expert system to diagnose quality control problems and provide feedback for machine control and plant automation.

Forintek is now in a position to distribute its Active Guide System to interested member sawmills. Working in tandem with the Bandsaw Monitoring System, the devices virtually eliminate cutting biases. The system monitors, records and displays cutting accuracy for each cut while providing real-time tracing of sawblade deviation. With the recent installation at a member mill, Forintek has a demonstration site for a system that is ready to go on the market, while the mill is able to test a useful tool.

Recognizing that drying has a significant impact on lumber grade and ultimately on a sawmill's bottom line, Forintek spearheaded and partnered on a number of drying research and technology transfer projects over the past year.

Forintek's research shows that there is still considerable value-added and recovery potential at each stage of the primary lumber manufacturing process.



Achieving drying uniformity and operating an efficient kiln drying system, especially given current energy costs, is a high priority among Forintek members. For example, Forintek is collaborating with a federal agency, CANMET, to evaluate kiln control practices in terms of impact on energy consumption. We also began offering members our Kiln Monitoring System (KMS). It is an intensive and effective way to pinpoint problems and revenue losses in the lumber drying process. Trials have shown that non-uniform drying conditions inside a kiln will lead to some of the lumber being over-dried, resulting in warp and drying degrade. Using the KMS, Forintek staff members monitor data for one to three months, and then prepare summaries to help mill managers improve drying schedules and establish priorities for kiln repairs and upgrades.

Forintek drying specialists also spent considerable time this year providing seminars to raise the level of awareness and knowledge of the importance of proper lumber drying. We partnered with the University of New Brunswick's Wood Science and Technology Centre to present an SPF lumber drying course at the Maritime Forest Ranger School in Fredericton. At the request of industry members, Forintek drying specialists have now begun presenting more advanced seminars at Alberta sawmills that involve case studies, more in-depth data collection and schedule development procedures. They have also developed a four-hour, on-site seminar aimed at a cross-section of mill employees to help sawmills achieve a higher degree of drying uniformity.



In addition to providing critical technical data in the field, Forintek scientists are also tackling specific drying issues. As member companies investigate opportunities for supplying the secondary manufacturing sector, Forintek is providing them with the necessary criteria to help them maintain very high kiln-drying performance. We are investigating the benefits of air drying balsam fir as one way of addressing the problem of proper drying technique for this species.

Large-scale application and efficacy tests conducted over the past year at a member mill confirmed the technical feasibility of an integrated method developed by Forintek to protect lumber from sapstain. The method, which is covered by a US Patent, relies on a combination of an albino fungus, and an alkali treatment. According to a pre-commercial economic feasibility study, the integrated biocontrol treatment will cost no more to the mill than current anti-sapstain chemicals, while ensuring low environmental and human health impact. The next step towards registration and commercial development will be to identify an industrial partner.

Further research continued on the issue of mold growing on wood products and whether it represents a health hazard if brought into buildings. Mold tends to grow on lumber left out in the rain or improperly stored during transit. While it is now generally recognized that no link between human health and inhaled mycotoxins has been shown, the notoriety of certain molds labeled as 'toxic' during the early stages of the mold hysteria remains. Forintek initiated a project to determine the fungi types found on re-wetted kiln-dried wood and green lumber, and compared them with fungi found in building interiors, especially those associated with water damage. The "molds" found on the re-wetted lumber were not molds, but mainly staining fungi, which are not a health concern. The true molds found are also commonly found on rotting fruit, etc. and are not the ones that have been labeled as 'toxic'. During the work, we also developed test methods to study the effects on wood of re-wetting and to enable the mold resistance of potential treatments to be determined.



Canada's efforts to develop new markets and improve market access for its wood products went into high gear over the past year, spurred in part by a \$29.7 million federal government investment in the Canada Wood Export Program (CWEP). It is a major effort undertaken with industry associations and provinces to expand Canada's sales to countries such as China, Taiwan, Korea and India.

Prior to that, the federal government announced a \$5.3 million contribution to the Canada-China Wood Products Initiative, to be led by the Council of Forest Industries and Natural Resources Canada.

Forintek is expected to play a prominent role in helping the federal government achieve its objectives under both these programs. Last October, for example, interest in the Chinese market drew about 100 participants to a China Wood Market Perspectives seminar held in Vancouver. Organized with Forintek's help, this one-day session was sponsored by the Canadian Forest Service (CFS) through CWEP to guide the Canadian industry as well as researchers in both countries. Topics ranged from Chinese codes and standards for wood structures to training and technology transfer initiatives for wood-frame construction in China.

Under the Canada-China Wood Products Initiative to expand the China and Taiwan market for Canadian wood products, Forintek and the American Forest and Paper Association (AF&PA) assisted the China code committees to draft key sections of the national codes impacting wood-frame construction. In China, this effort culminated in two significant achievements. The first was the modification of China's National Inspection Code for Timber Construction to cover wood-frame construction, lumber and wood-based panel products. The code now recognizes North American wood-frame construction. The second achievement was the major revision to China's National Timber Design Code to include not only conventional wood-frame construction provisions similar to those found in Canada and the US, but also a list of the major North American grades and species of lumber. Provisions for developing design values for truss plate connectors and design capacities for wood-based shearwalls were also introduced. The Timber Design Code is currently going through the final stages of approval.

As in China, there was a similar effort to expand the Taiwan timber design code to include wood-frame construction. The modified code includes a list of the major North American grades and species of lumber. Because of the extremely high wind and seismic loads in Taiwan as compared to China, the housing portion of the code was developed, as a first step, to make reference to the American Wood Council's *Wood Frame Construction Manual for One- and Two-Family Dwellings*.



Forintek continues to have strong representation on several domestic and international standards committees.

In the US, Forintek and the National Lumber Grades Authority (NLGA) provided support to the American Lumber Standard Committee's (ALSC) Enforcement Subcommittee Technical Task Group, which enabled them to update the ALSC Glued Lumber Policy. This Policy outlines the minimum US requirements for product standards covering fingerjoined and other glued structural lumber. Before the updated Policy there were significant differences between the fingerjoined lumber product standards published by the NLGA and the US agencies. When the Policy is fully implemented, the basis for the requirements for fingerjoined lumber in the NLGA and US product standards will be harmonized.

Forintek scientists were invited by the Japanese government to a meeting last fall in the US to discuss codes and standards issues. Two detailed presentations were given – one on Canadian fire regulations applicable to interior wall surfaces of large buildings, and the second on the strength equivalency of jack pine in the Japanese standard. Forintek research and modeling work on assemblies that meet the 'one plus three-hour' fire test is a key factor for the Canadian industry to take advantage of new options for wood-frame construction in Japan. Also, Japanese officials received a six-page report outlining the physical and mechanical properties of jack pine, and glulam made from jack pine, in relation to the requirements of the Japanese Agricultural Standard for structural glulam. The intent of the presentation was to facilitate adoption of Canadian jack pine by the Japanese glulam industry.



Forintek continues to have strong representation on several domestic and international standards committees. Having direct input into the drafting of structural, fire and durability codes and standards ensures that wood is treated fairly when pitted against competing construction materials as far as the writing and enforcement of building codes and standards are concerned. Computer fire modelling is one of the most important high-tech tools in fire safety engineering and fire science. For a number of years, fire researchers at Forintek have been striving to develop heat-transfer models for wood-frame assemblies. One of these models, WALL2D, predicts heat transfer through simple non-load-bearing wood-stud walls filled with thermal/acoustical insulation and finished on each face with gypsum wallboard. It is already being used in the design and development of products for construction of fire-resistance-rated walls.

On the market intelligence side, the prefabricated wall panel market in the US has been identified as a significant trend worth watching and investigating as a potential new market opportunity for Canadian wood products. Forintek market specialists report that the market share for prefabricated wall panels in US single-family construction reached 18 per cent in 2001. This year, Forintek staff conducted a more detailed analysis of the circumstances driving this trend, and the specific needs of particular component builders.

So far, their research has shown that in wall panels, spruce-pine-fir (SPF) is by far the preferred species group. In roof trusses, however, the most frequently used species is southern yellow pine (SYP). Forintek's investigation found that opportunities exist for some Canadian species to increase their market share in US roof truss plants, although SYP is very competitively priced.

In another study, it was observed that pro-dealers already serving the homebuilding industry in the US are increasingly providing builders with complete solutions, of which structural components such as roof trusses, floor trusses and wall panels are a part. As automated techniques for producing wall panels and roof trusses spread rapidly among component manufacturers, builders and pro-dealers, Forintek also found that there is an opportunity for softwood lumber producers to focus on straight and wane-free lumber dedicated to components.

One other area that Forintek studied in more detail over the past year related to the relatively small use of wood by institutional furniture manufacturers in the US. Information was gathered on wood usage between 1997 and 2000 broken down into hardwood and softwood consumption, as well as consumption of softwood plywood in structural panels and hardwood plywood in nonstructural panels. In addition to wood-use statistics, the study gathered information on usage trends, substitution trends, species breakdowns, and attributes demanded. This resulted in important information for the wood products industry that could be used to increase market share in this potentially large end-use sector.

The recent media focus on the health issues of mold in houses generated a large number of enquiries to Forintek scientists. To deal with this situation, a relational database was set up where all the relevant interconnected information can be stored and periodically updated. The database allows searches of the information from different angles, aggregating responses to queries and regular updates. Partly funded by the AF&PA, the database contains information extracted from 700 peer-reviewed articles from several disciplines. An expert team from Forintek and the University of British Columbia's School of Occupational Health and Hygiene now use the database as a tool to answer tough questions on molds from Forintek members. The team will also use the database to produce reports and fact sheets that will assist the industry.

Last June, the ATHENA™ Sustainable Materials Institute released the first commercial version of their software, which had previously been in wide use as a free demonstration version, and downloaded by over 1500 people worldwide. Forintek has spent several years supporting development of a comprehensive computer model, and ATHENA™ Environmental Impact Estimator was the outcome. It assesses the environmental consequences of using wood and other building materials, in order to provide a tool for designers to directly and credibly compare the environmental performance of wood designs with designs using other construction materials.

The recent media focus on the health issues of mold in houses generated a large number of enquiries to Forintek scientists.



Value-added Manufacturing Highlights



The federal and provincial governments made a significant investment into research, development and technology transfer related to secondary and value-added manufacturing this year. Natural Resources Canada announced last spring that the National Value-added Initiative for Wood Products (*Value to Wood*) would receive \$15 million over the next five years. Forintek will receive \$10 million for research and technology transfer to help value-added manufacturers improve their competitiveness, develop new products and applications, and move up the value chain. The remaining \$5 million will support value-added research at four Canadian universities.

Given our experience and success in developing a wide range of new production and marketing strategies within this manufacturing sector, Forintek has been highly involved in gaining full value for our membership by actively participating in value-added initiatives. This has included presenting proposals for research based on member priorities, as well as leveraging our research program by partnering with universities, industry representatives, other domestic research organizations, and international wood product research institutes.

To transfer the research results to industry, Forintek scientists and support staff continued to develop strong one-on-one relationships with value-added manufacturers over the past year to help them address a wide variety of challenges. Over forty projects were completed. These ranged from assisting with materials handling concepts and plant layout that improved manufacturing efficiencies, to investigating drying and gluing problems and providing in-plant solutions that lowered manufacturing costs, and improved product quality. Assistance was also given to companies seeking to develop new products, expand their operations or specify equipment. Some examples of these projects follow.

Staff analyzed automatic chop saw operations at six value-added facilities to show how performance and recovery can be benchmarked and monitored on an on-going basis. They also developed an evaluation system to keep tabs on each chop saw function as well as overall productivity. A chop saw is one of the most effective tools for boosting the value of low-grade lumber – when everything works the way it should.

Other projects completed last year included: a survey of homebuilder perceptions of engineered wood products; a survey of the attributes demanded by the value-added component manufacturing sector; an investigation of the use of lesser-used Canadian species in furniture and interior finish; an assessment of market opportunities for Western Canadian aspen in the US, Japan, and Western Europe; and two benchmarking market/competitor studies in China.



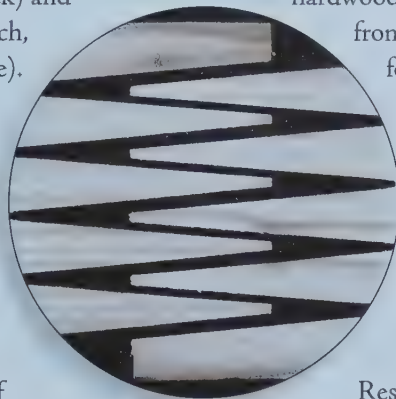
Forintek has been highly involved in gaining full value for our membership by actively participating in value-added initiatives.

Two years ago, the study Consumer Visual Evaluation of Underutilized Canadian Wood Species provided evidence of the opportunities non-traditional species have in value-added markets. The project continued this year by producing flooring, cabinet door, and furniture prototypes with select Saskatchewan (aspen, white birch and tamarack) and British Columbia species (western larch, western hemlock, and broadleaf maple). The prototyping efforts, from raw materials to final products, were written up in a series of case studies that highlight the strengths and weaknesses of the supply chain and of the species themselves.

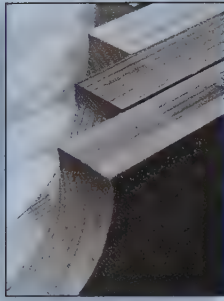
A recent study identified significant market opportunity for high grades of Western Canadian aspen in Japan. There has been a demographic shift in the Japanese market from dark colored woods to more light, bright, almost characterless-grain wood, resulting in strong interest in aspen by Japanese manufacturers for just about every interior finishing application. A number of Forintek Industry Advisors shared that message with aspen sawmill owners last year at an 'Aspen Value-added Workshop' held in Peace River, Alberta. While the task of taking Western Canadian value-added aspen production to the next level will be challeng-

ing, sawmill owners were reassured that the technical assistance needed to build their businesses is available to them.

Staff investigated the benefit of optimizers working in tandem with a manually operated edging system in a hardwood mill as one way to extract more value from lower-grade logs. What the study found was that the use of an edger optimizer to complement operators' decisions has the potential to increase annual revenues by at least \$200,000 on the basis of 10 MMbf per year. Depending on the quality of an operator's decisions, gains could reach up to \$600,000.



Research continued on the development of guidelines for finger-joint optimization, with work over the past year focussing on the effects of wood temperature and moisture content on bending and tensile strength. A Forintek report entitled, 'Verification of the Key Parameters Affecting the Finger-jointing Process' details the test procedure and results obtained with the two adhesives used under various sets of conditions as set out in the test.



Tapping into Forintek's value-added manufacturing process and marketing research reduces the diversification risk for Forintek members.

Forintek signed a collaborative agreement with a Quebec research and development centre called SEREX. Its expertise in resins and paper laminates is a good fit with Forintek's own knowledge of wood composites. This partnership is expected to work well in research related to the manufacture of composite flooring. SEREX boasts a complete pilot line for double impregnation of finishing papers. Other joint projects are planned in connection with solid wood impregnation and densification treatments – two avenues identified by Forintek members as having great potential for development of value-added products.

Facilitating technology transfer through the organization of three technology missions to key secondary wood manufacturing regions of the United States was also an important thrust of advancing Forintek's value-added program over the past year. In many cases, Canadian secondary manufacturers gained access to facilities that normally would have been closed to them had they not participated in these technology missions. The first mission was to New England, where participants were exposed to mould-

ing and millwork, furniture manufacturing, lumber retailing, saw blade maintenance, wood component manufacturing, manufactured home building, and dowel manufacturing. The second mission was to the Mid-West, where the objective was to learn about system building trends, particularly from panelized builders. The final mission was to Oregon, to visit a broad cross-section of manufacturers, looking at green block finger-jointing (including a demonstration of the Green Weld process), mouldings, furniture manufacturing, and edge-glued panel construction. Several participants indicated that they acquired information about a number of improvements that could be made in their own operations, as well as the potential for new and expanded market penetration.

An analysis of companies sampled in 2002-2003 identified considerable benefit to the industry as a result of Forintek's technical assistance, as measured by cost savings in materials, increased manufacturing efficiencies, and new products developed. The results have been significant and have clearly shown a considerable return on investment for the funders.

Consolidated Financial Statements

March 31, 2003

May 9, 2003

Auditors' Report

To the Members of
Forintek Canada Corp.

We have audited the consolidated balance sheet of Forintek Canada Corp. as at March 31, 2003 and the consolidated statements of operations and fund balance, changes in net assets and cash flows for the year then ended. These financial statements are the responsibility of the Corporation's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the Corporation as at March 31, 2003 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

Price Waterhouse Coopers LLP

Chartered Accountants

Consolidated Balance Sheet

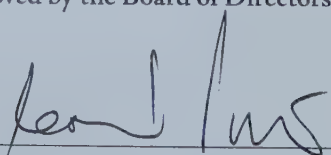
As at March 31, 2003

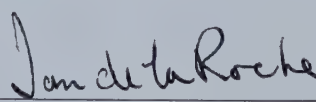
	2003 \$	2002 \$
Assets		
Current assets		
Cash	29,752	1,749,999
Short-term investments	–	1,975,615
Accounts receivable	7,161,478	2,761,961
Work-in-progress	1,526,379	544,714
Prepaid expenses	226,775	150,103
	8,944,384	7,182,392
Capital assets (note 3)	41,973,457	39,981,718
	50,917,841	47,164,110

Liabilities and Fund Balance

Current liabilities		
Accounts payable and accrued liabilities	3,334,308	1,803,765
Deferred revenue (note 5)	1,888,048	1,849,176
Current portion of obligation under capital leases (note 7)	46,986	44,028
Current portion of long-term debt (note 8)	55,000	30,000
	5,324,342	3,726,969
Deferred pension liability	2,521,200	2,414,900
Deferred contributions related to capital assets (note 6)	37,386,844	36,283,341
Obligation under capital leases (note 7)	109,262	154,955
Long-term debt (note 8)	265,000	290,000
	45,606,648	42,870,165
Fund balance		
Invested in capital assets	4,112,265	3,181,296
Unrestricted	1,198,928	1,112,649
	5,311,193	4,293,945
	50,917,841	47,164,110

Approved by the Board of Directors

 Director

 Director

Consolidated Statement of Changes in Net Assets

For the year ended March 31, 2003

	2003		2002	
	Unrestricted \$	Invested in capital assets \$	Total \$	Total \$
Balance – Beginning of year	1,112,649	3,181,296	4,293,945	4,112,047
Excess (deficiency) of revenue over expenses for the year	1,677,241	(659,993)	1,017,248	181,898
Investment in capital assets	(1,548,229)	1,548,229	–	–
Repayment of capital lease obligation	(42,733)	42,733	–	–
Balance – End of year	1,198,928	4,112,265	5,311,193	4,293,945

Consolidated Statement of Operations and Fund Balance

For the year ended March 31, 2003

	2003 \$	2002 \$
Revenue		
Government contributions and industry member assessments	15,574,276	13,869,111
Contract fees	9,855,978	8,639,060
Other income	507,250	549,754
	<u>25,937,504</u>	<u>23,057,925</u>
Expenses		
Administrative	987,456	945,147
Laboratory	7,629,867	6,817,686
Premises	1,955,300	1,772,912
Staffing	13,687,640	12,798,095
	<u>24,260,263</u>	<u>22,333,840</u>
Excess of revenue over expenses before amortization and depreciation	1,677,241	724,085
Amortization of deferred contributions related to capital assets	1,547,082	1,579,212
Depreciation and amortization	<u>(2,207,075)</u>	<u>(2,121,399)</u>
Excess of revenue over expenses for the year	1,017,248	181,898
Fund balance – Beginning of year	4,293,945	4,112,047
Fund balance – End of year	<u>5,311,193</u>	<u>4,293,945</u>

Consolidated Statement of Cash Flows

For the year ended March 31, 2003

	2003	2002
	\$	\$
Cash flows from operating activities		
Excess of revenue over expenses for the year	1,017,248	181,898
Items not affecting cash		
Amortization of deferred contributions related to capital assets	(1,547,082)	(1,579,212)
Depreciation and amortization	2,207,075	2,121,399
	1,677,241	724,085
Increase (decrease) in deferred pension liability	106,300	(23,400)
Changes in non-cash working capital balances, excluding current portions of obligation under capital leases and long-term debt	(3,888,441)	(1,701,612)
	(2,104,900)	(1,000,927)
Cash flows from investing activities		
Purchase of capital assets	(4,198,814)	(1,584,155)
Cash flows from financing activities		
Contributions used to acquire capital assets	2,650,585	878,947
Increase in capital lease obligation	–	100,705
Repayment of capital lease obligation	(42,733)	(42,542)
	2,607,852	937,110
Decrease in cash during the year	(3,695,862)	(1,647,972)
Cash – Beginning of year	3,725,614	5,373,586
Cash – End of year	29,752	3,725,614
Cash is represented by		
Cash	29,752	1,749,999
Short-term investments	–	1,975,615
	29,752	3,725,614

Notes to Consolidated Financial Statements

March 31, 2003

1 Purpose of the Corporation

Forintek Canada Corp. is a not-for-profit organization incorporated under Part II of the Canada Corporation Act.

The purpose of the Corporation is to be the leading research organization for the technological advancement of the Canadian solid wood products industry, through the creation and implementation of innovative concepts, processes, products, and training programs. The Corporation depends on member and government contributions and contract revenue to support its activities.

In the event of dissolution, the net assets of the Corporation are to be distributed to a similar not-for-profit organization for the purposes of continuing scientific research.

2 Significant accounting policies

Basis of presentation

These financial statements include the accounts of the Corporation and its wholly owned U.S. subsidiary, Forintek International Incorporated (FII). FII was incorporated on December 22, 1998 and has not commenced operations.

Use of estimates

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of member assessment receivables, work-in-progress, and deferred revenue as at year-end. Estimates also affect the reported amounts of related revenues and expenses. Actual results could differ from the estimated amounts.

Revenue recognition

The Corporation follows the deferral method of accounting for government contributions and industry member assessments, which are recorded when receivable and collection is reasonably certain.

Industry member assessments

Industry member fees are recorded based on self-assessments by each member of the amounts owing to the Corporation.

Capital contributions

Contributions provided specifically for the acquisition of capital assets are initially recorded as deferred contributions, and are included in revenue on the same basis as the related capital assets are depreciated.

Contract revenue

Revenue from contracts is recorded on the percentage-of-completion basis. Unbilled contract revenue, included on the balance sheet as work-in-progress, represents the excess of contract revenue earned over billings on specific contracts. Deferred contract revenue represents the excess of contract billings over revenue earned on specific contracts.

Capital assets

Capital assets purchased by the Corporation are recorded at cost less accumulated depreciation and amortization. Contributed capital assets are recorded at fair value at the date of contribution. Amortization and depreciation are provided over the estimated useful lives of the assets on a straight-line basis as follows:

Leasehold interest in Vancouver land	40 years
Buildings	40 years
Laboratory and shop equipment	10 years
Office equipment, furniture and fixtures	5 and 10 years
Computer equipment and software	5 years

Employee benefit plans

The Corporation accrues its obligations under employee benefit plans and the related costs, net of plan assets. The cost of pensions and other retirement benefits earned by employees is actuarially determined using the projected benefit method pro-rated on service and management's best estimate of expected plan investment performance, salary escalation, retirement ages of employees, and expected health care costs.

3 Capital assets

	2003		2002	
	Cost \$	Accumulated depreciation and amortization \$	Net \$	Net \$
Vancouver				
Prepaid land lease	3,624,300	1,087,290	2,537,010	2,627,617
Building	20,649,623	6,202,856	14,446,767	14,964,203
Quebec City				
Land	484,776	–	484,776	484,776
Building	17,131,066	3,272,806	13,858,260	14,298,953
Laboratory and shop equipment	19,515,224	9,781,441	9,733,783	6,787,273
Office equipment, furniture and fixtures	1,977,540	1,662,612	314,928	356,770
Computer equipment and software	1,650,223	1,052,290	597,933	462,126
	65,032,752	23,059,295	41,973,457	39,981,718

Included in office equipment, furniture and fixtures are items held under capital leases with a net book value of \$187,341 (2002 – \$24,471), cost of \$230,723 (2002 – \$230,723) and accumulated depreciation of \$43,382 (2002 – \$16,252).

4 Bank indebtedness

The Corporation has an operating line of credit of \$2,000,000 for general business purposes. The interest rate is at prime bank lending rate per annum. At year-end, there was no balance outstanding on the line of credit.

5 Deferred revenue

Deferred revenue consists of deferred contract revenue and operating contributions received for use in future periods.

The balances are as follows:

	2003 \$	2002 \$
Deferred contract revenue	779,592	462,562
Deferred operating contributions Federal Government	<u>1,108,456</u>	<u>1,386,614</u>
	<u>1,888,048</u>	<u>1,849,176</u>

During the year ended March 31, 2001, the Corporation received \$4,221,000 from the Federal Government to assist with funding operations anticipated for 2001, 2002 and 2003. In the current year, the Government allowed the Corporation to defer recognition of the balance of the deferred revenue until the funds are used, which is anticipated will be prior to March 31, 2004.

6 Deferred contributions related to capital assets

Deferred contributions related to capital assets represent contributions made by government and industry members for the purpose of constructing the Vancouver and Sainte-Foy facilities and for acquisition of specific equipment. The changes in the deferred contributions balance for the year are as follows:

	2003 \$	2002 \$
Balance – Beginning of year	36,283,341	36,983,606
Add: Contributions used to acquire capital assets	2,650,585	878,947
Less: Amounts amortized to revenue	<u>(1,547,082)</u>	<u>(1,579,212)</u>
Balance – End of year	<u>37,386,844</u>	<u>36,283,341</u>

7 Obligation under capital leases

	2003 \$	2002 \$
The Corporation has entered into three capital leases for the telephone system and two photocopiers. These leases have combined monthly payments of \$7,935 and bear interest at between 7% - 11%. The lease terms expire between June 2004 and September 2006	156,248	198,983
Less: Current portion	<u>46,986</u>	<u>44,028</u>
	<u>109,262</u>	<u>154,955</u>

The Corporation is committed to capital lease obligations as follows:

	2003 \$	2002 \$
Minimum lease payments	183,935	244,232
Less: Interest	<u>27,687</u>	<u>45,249</u>
Principal obligations	<u>156,248</u>	<u>198,983</u>

Future minimum lease payments are as follows:

	\$
Year ending March 31	
2004	60,296
2005	52,150
2006	49,436
2007	<u>22,053</u>
	<u>183,935</u>

8 Long-term debt

	2003 \$	2002 \$
Government of Canada loan, non-interest bearing, payable in annual installments over five years commencing April 2003	320,000	320,000
Less: Current portion	55,000	30,000
	<u>265,000</u>	<u>290,000</u>

Estimated principal repayments on long-term debt are as follows:

	\$
Year ending March 31	
2004	55,000
2005	65,000
2006	60,000
2007	70,000
2008	70,000
	<u>320,000</u>

Initially, the government loan repayments were to commence in July 2001. Due to delays in the start-up of the MDF pilot plant, the Corporation has requested deferral of the first repayment to April 2003.

9 Pension plan

The Corporation maintains a contributory defined benefit pension plan that covers all employees 30 years of age and over. The plan provides pensions based on length of service and best average five years' earnings. The Corporation's present funding practice is to match employee contributions to the plan and accrue the remainder of the annual pension expense as a deferred pension liability. The pension expense for the year amounted to \$490,000 (2002 – \$323,600).

Based on the actuarial valuation as at January 1, 2000, the estimated present value of the accrued benefits obligation at March 31, 2003 is \$26,825,300 (2002 – \$22,071,400) and the fair value of the pension fund assets at March 31, 2003 is \$21,889,100 (2002 – \$24,739,000).

10 Fair value of financial instruments

The Corporation has various financial instruments including cash, short-term investments, accounts receivable, and accounts payable and accrued liabilities. The estimated fair values of these financial instruments approximate their carrying values as the amounts are short term in nature. The fair value of the long-term debt is estimated at \$263,000 assuming an effective interest rate of 4% per annum on the debt.

Members

as at March 31, 2003

Government

Natural Resources Canada
– Canadian Forest Service
Alberta – Economic Development
British Columbia – Ministry of Forests
New Brunswick – Business New Brunswick
Newfoundland and Labrador
– Department of Forest Resources
and Agrifoods
Nova Scotia
– Department of Natural Resources
Quebec – Ministry of Natural Resource
Saskatchewan
– Ministry of Industry and Resources

Industry

Alberta

Almas Lumber (Alberta) Ltd.
Boscher Brothers Lumber Ltd.
Brennan Lumber
(A Division of Gordon Buchanan
Enterprise Ltd.)
Crestview Sawmills Ltd.
Henry Vasseur Custom Planing Ltd.
Jager Building Systems Inc.
La Crete Sawmills Ltd.
Manning Diversified Forest Products Ltd.
Millar Western Forest Products Ltd.
Mostowich Lumber Ltd.
Northland Forest Products Ltd.
Rocky Wood Preservers Ltd.
Seehra Forest Products Ltd.
Spray Lake Sawmills (1980) Ltd.
Strachan Forest Products
Sundance Forest Products Ltd.
Treeline Wood Products Ltd.
Vanderwell Contractors (1971) Ltd.
Zavisha Sawmills Ltd.

British Columbia

Ardev Wood Products Ltd.
Babine Forest Products Co.
(A subsidiary of Weldwood of Canada Limited)
Canadian Forest Product Ltd.
Compwood Products Ltd.
Downie Timber Ltd.
Dunkley Lumber Ltd.
EnerGreen Building Systems Ltd.
Federated Co-operatives Limited
Houston Forest Products Company
(A subsidiary of Weldwood & West Fraser)
Kalesnikoff Lumber Co. Ltd.
Kootenay Innovative Wood Ltd.

Lakeland Mills Ltd.
(A subsidiary of Sinclair Group)
Lignum Ltd.
LP Engineered Wood Products Ltd.
Lytton Lumber Ltd.
Mill & Timber Products Limited
Pope & Talbot Ltd.
Richmond Plywood Corporation Limited
Riverside Forest Products Limited
Seel Forest Products Ltd.
Slocan Forest Products Ltd.
Snowcap Lumber Ltd.
TimberWest Forest Corp.
Tl'oh Forest Products Limited Partnership
Tolko Industries Ltd.
Weldwood of Canada Limited
West Fraser Timber Co. Ltd.
Weyerhaeuser Company Ltd.

New Brunswick

Boise Cascade Alljoist Ltée
Chaleur Sawmills
Groupe Savoie

Nova Scotia

Barrett Lumber Co. Ltd.
Ledwidge Lumber Company Limited

Ontario

Alpa Lumber Inc.
Columbia Forest Products Co. Ltd.
Longlac Wood Industries Inc.
McRae Lumber Company Ltd.
Norbord Industries Inc. (includes Nexfor
Technology and Noranda Technology
Centre)
Taiga Forest Products Ltd.

Quebec

403-2608 Canada Inc.
Abitibi-Consolidated Inc.
BOA-FRANC Inc.
Bois B.S.L. Lumber
Bois Daaquam Inc.
Bois de Structure Lee Inc.
Bois d'œuvre Cedrico
Bois Oméga Ltée
Boisaco Inc.
Bowater Forest Products Canada Inc.
Claude Forget (1979) Inc.
Coopérative forestière Latérière
Distribution Open Joist 2000 Inc.
Domtar Forest Products Inc.
E. Tremblay et Fils Ltée
Éloi Moisan Inc.
Emco Building Products Ltd.
Félix Huard Inc.
Foresbec Inc.
Gérard Crête et Fils Inc.
Gestofo Inc.
Giguère & Morin Inc.
Groupe G.D.S. Inc.
Industrie Bois Lamontagne Inc.
Industries Manufacturières Mégantic Inc.
J.A. Fontaine & Fils Inc.
Kruger Inc.
Lauzon
Les Chantiers de Chibougamau Ltée
Les Distributions Option Kit Inc.
Les Emballages Jomat inc.
Les Entreprises JM Champeau Inc.
Les Entreprises Lionel Lessard Inc.
Les Industries Légaré Ltée
Les Placages Proflex
Louisiana-Pacific Corporation – Northern
Division (including Canada)
Lulumbo Inc.
Maibec Industries Inc.
Marcel Lauzon Inc.
Matériaux Blanchet Inc.
Max Meilleur & Fils Ltée
New Wood Technologies
Pan-O-Starr Inc.
PCI Industries
Précitech International Inc.
Produits de bois PBF
Produits forestiers La Tuque inc.
Produits forestiers Petit Paris inc.
Produits forestiers Turpin inc.
Romaro Structure Corp.
Sacopin Inc.
Scierie Bionor Inc.
Scierie Gaston Morin Inc.
Scierie Gauthier Ltée
Scierie Girard Inc.
Scierie Lachance Ltée
Scierie Lac St-Jean Inc.
Scierie Martel Ltée
Scierie P.H. Lemay & Fils Ltée
Scierie Saguenay Ltée
Scierie St-Elzéar
Scierie Thomas-Louis Tremblay Inc.
SGF Rexfor Inc.
Shermag Inc.
Simon Lussier Ltée
Solve Ajourée 2000 Inc.
Stadacona Paper Ltd.
Sylvio Brunet & Fils Ltée
Tembec Industries Inc.
Thermobois Inc.
Tuile Bois Franc Inc.
Uniboard Canada Inc.
Vexco Inc.

Associate Members

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Ashland Specialty Chemical Co.
Autolog Inc.
Axton Manufacturing Ltd.
Borden Chemical Canada Inc.
Buckman Laboratories Canada Ltd.
CAE Machinery Ltd.
Cathild Inc.
Chemco Acquisition Corp.
Clariant (Canada) Inc.
Comact Inc.
Conception R.P. Inc.
Consolidated Machinery International – A
Division of HSC Inc.
Delmhorst Instrument Co.
Diacon Technologies Ltd.
Dieffenbacher North America Inc.
Doucet Machineries Inc.
Dural – Division of Multibond Inc.
Eldeco Industries Limited
Epoxy Tech M.C.S. Inc.
Gemofor Inc.
Genics Inc.
Green Belt Renewable Energy Inc.
Groupe For-Min
Huntsman International (Canada)
Corporation
Hydro-Québec
Laboratoire Primattech Inc.
Les Produits Gilbert inc.
Les Séchoirs de l'Est (90619 Canada Ltée)
Lignol Innovations Corp.
LMI Technologies Inc.
Machinerie Lico Inc.
MPM Engineering Ltd.
Nacan Products Limited
P.L.C. Inc.
Porter Engineering Ltd.
Premilec Inc.
Raute Wood Ltd.
Sawquip International Inc.
Séchoirs Côté Inc.
Séchoirs Kingsey Falls Inc.
Séchoirs MEC Inc.
Silvachem Inc.
Stella-Jones Inc.
Systech Industrie Inc.
Timber Specialties Co.
U.S. Borax Inc.
USNR
Valon Kone Brunette Ltd. (VKD)
Wagner Electronic Products Inc.
Westmill Industries Ltd.

Corporate Information

as at March 31, 2003

Officers of the Corporation

Chair

R. Bélanger
President and CEO
Bois Daaquam Inc.

Vice-Chair

S. Gray
Senior Vice-President, Wood Products
Weldwood of Canada Limited

President and CEO

I.A. de la Roche

Vice-Presidents

J.A. Dangerfield
J.-C. Mercier

Corporate Secretary

P.K.P. Chau

Board of Directors

Chair

R. Bélanger (1*)
President and CEO
Bois Daaquam Inc.

Vice-Chair

S. Gray (1)(2*)
Senior Vice-President, Wood Products
Weldwood of Canada Limited

M. Bouchard

Vice-President, Quebec Sawmills
Domtar Forest Products Inc.

D. Brière

Dean, Faculty of Forestry and Geomatics
Laval University

I.A. de la Roche (1)(4*)

President and CEO
Forintek Canada Corp.

M.J. Douglas

Vice-President, Marketing & Sales
Riverside Forest Products Ltd.

J. Dubé

Deputy Minister
Business New Brunswick

R.J. Fessenden

Deputy Minister
Alberta Sustainable Resource Development

J.-P. Gilbert

Director
Quebec Ministry of Natural Resources

Y. Hardy

Assistant Deputy Minister
Natural Resources Canada (CFS)

B.R. Hislop (1)

Group Vice-President
& Chief Technology Officer
Canfor Corporation

S.K. Ketcham

Director, Corporate Planning
West Fraser Timber Co. Ltd.

J.-S. Lebel

Vice-President
Bowater Forest Products Canada Inc.

F. LeClair

President, Forest Products Group
Tembec Industries Inc.

Y. McKinlay (1)

President
Norbord Industries Inc.

B. McRae (2)(4)

Assistant Deputy Minister
British Columbia Ministry of Forests

L. Palmer

President and Director General
Gérard Crête & Fils Inc.

C.A. Pinette (2)

President & COO
Lignum Ltd.

R. Savard

Manager, Engineering and Operation
Abitibi-Consolidated Inc.

J.-C. Savoie

President
Group Savoie Inc.

C.L. Slater (1)

Vice-President, Alberta Operations
Weyerhaeuser Company Limited

L. Spanner

Deputy Minister
Saskatchewan Industry and Resources

D. Tardif

Senior Vice-President
Kruger Inc.

F.S. Thomas

Director General
Industry Canada

Board Members Resigned or Retired 2002-2003

D.D. Caron

R.J. Clinton
W. Hemsley
R. Robitaille

Board Committees

1 Executive

2 Audit

3 National Research Program

4 Pension Administration

* Chair

The Executive Committee acts on behalf of the Board in the intervals between Board meetings. It also approves all member applications, and functions as the Nominating Committee.

The Audit Committee reviews any changes to accounting principles and the annual audit, and approves the financial statements on behalf of the Board.

The National Research Program Committee provides advice and guidance on the orientation of research and development programs, relates the programs to the immediate and long-term needs of the wood products industry, and provides advice on the industrial applications of Forintek's work.

The Pension Administration Committee fulfills the Corporation's legal responsibilities for the Forintek Canada Corp. Employees' Pension Plan.

Planning Committees

as at March 31, 2003

National Research Program Committee

Chairman
Alan Potter
Noranda Technology Centre/Nexfor Inc.

Jacques Bégin
Quebec Council of Forest Industries

Rob Bickford
Weldwood of Canada Limited

George Bruemmer
Tembec Industries Inc.

Serge Constantineau
Domtar Forest Products Inc.

Jim Engleson
Canadian Forest Products Ltd.

Jim Farrell
Natural Resources Canada (CFS)

Peter Kofoed
Weyerhaeuser Company Ltd.

Bill Love
Tembec Industries Inc.

Lois McNabb
British Columbia Ministry of Forests

Stewart Marcoux
Domtar Forest Products Inc.

Sylvain Ménard
Distribution Open Joist 2000 Inc.

André Proulx
Kruger Inc.

François Rouleau
Quebec Ministry of Natural Resources

Toomas Ruberg
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Charles Tardif
Maibec Industries Inc.

Cliff Tuttle
Pope & Talbot Ltd.

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Resource Assessment

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Yves Barrette
Quebec Ministry of Natural Resources

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Industries Manufacturières Mégantic Inc.

France Brulotte
Quebec Ministry of Natural Resources

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Francine Dorion
Abitibi-Consolidated Inc.

Fraser Dunn
Ontario Ministry of Natural Resources

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Natural Resources Canada (CFS)

Gilles Gaboury
Quebec Ministry of Natural Resources

Brian Hicks
Domtar Forest Products Inc.

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Félix Huard Inc.

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Tembec Industries Inc.

Peter MacQuarrie
Nova Scotia Department of Natural Resources

Geoff Munro
Natural Resources Canada (CFS)

Dale Munroe
Abitibi-Consolidated Inc.

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New Brunswick Department of Natural Resources and Energy

Muhammed Nazir
Newfoundland and Labrador Department of Forest Resources and Agrifoods

Denis Ouellet
Natural Resources Canada (CFS)

Paul Patry
Abitibi-Consolidated Inc.

Ariane Plourde
Natural Resources Canada (CFS)

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Kruger Inc.

Jim Richard
Business New Brunswick

Luc Richard
Gérard Crête & Fils Inc.

Michel Rivard
Stadacona Paper Ltd.

André Rouleau
Gestofor Inc.

Denis Rousseau
Abitibi-Consolidated Inc.

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Nova Scotia Department of Natural Resources

Jacques Savard
Quebec Ministry of Natural Resources

Charles Tardif
Maibec Industries Inc.

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Ralph Archibald
British Columbia Ministry of Forests

Frank Barber
British Columbia Ministry of Forests

John Barker
University of British Columbia

Henry Benskin
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Bill Bourgeois
Lignum Ltd.

Gordon Dunwell
Tembec Industries Inc.

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David Harrison
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Weldwood of Canada Limited

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Weyerhaeuser Company Ltd.

Donna Macey
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British Columbia Ministry of Forests

Bryon Muhly
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Barrie Phillips
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Ted Szabo
Alberta Innovation and Science

Ralph Winter
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Vice-Chairman
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Huntsman International (Canada) Corporation

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Eric Bernard
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DURAL, Division of Multibond Inc.

Michel Bolduc
Louisiana-Pacific Corporation – Northern Division

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Louise Briand
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Pascal Brière
Uniboard Canada Inc.

Suezone Chow
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Les Cooke
Saskatchewan Environment and Resource
Management

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Westmill Industries Limited

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Simon-Pierre Fortin
Tembec Industries Inc.

Mike Fournier
Columbia Forest Products Co. Ltd.

Chris Fowler
West Fraser Timber Co. Ltd.

Guy Gervais
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Noël Grenier
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Todd King
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André Klemarewski
Raute Wood Ltd.

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Frank Laytner
Domtar Forest Products Inc.

Jean-Pierre Leblanc
Sacopan Inc.

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Norbord Industries Inc./Nexfor Technology

Rick Linkwater
Norbord Industries Inc./Nexfor Technology

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Resources

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U.S. Borax Inc.

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Uniboard Canada Inc.

Jim McCallum
Tembec Industries Inc.

Ritch McDonald
CAE Machinery Ltd.

Lois McNabb
British Columbia Ministry of Forests

James McPherson
Longlac Wood Industries Inc.

Ken Montgomery
Industry Canada

Stefan Muller
Tembec Industries Inc.

Nick Nagy
Canadian Plywood Association

Muhammed Nazir
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Forest Resources and Agrifoods

Dam Nguyen
Louisiana-Pacific Corporation – Northern
Division

Bill Palm
Lignol Innovations Corp.

Bryce Piggot
LP Engineered Wood Products Ltd.

Dale Plante
Borden Packaging and Industrial Products

Dan Price
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Benoit Provost
DURAL, Division of Multibond Inc.

Leo Regnier
Tolko Industries Ltd.

Jim Richard
Business New Brunswick

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Resources

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Ashland Specialty Chemical Company

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Richmond Plywood Corporation Limited

Al Simcoe
Weldwood of Canada Limited

Garrie Styan
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Zoltan Szucs
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Gino Thériault
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Khoa Tran
Norbord Industries Inc./Nexfor Technology

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André Verville
Uniboard Canada Inc.

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Yin Wang
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Tim Williams
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Ron Wood
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Lumber Manufacturing

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Maibec Industries Inc.

Vice Chairman
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Don Banks
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Keith Barrett
Barrett Lumber Co. Ltd.

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Roger Bellemare
Hydro-Québec

Denis Bérubé
Bois d'œuvre Cedrico Inc.

Michel Bouchard
Domtar Forest Products Inc.

Stéphane Bouchard
Abitibi-Consolidated Inc.

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Lou Bouwmeester
Riverside Forest Products Limited

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West Fraser Timber Co. Ltd.

Eric Brousseau
USNR

Gustave Brunet
Sylvio Brunet & Fils Ltée

Guy Cardinal
Shermag Inc.

Pierre Champeau
Les Entreprises JM Champeau Inc.

Gordon Clarke
Millar Western Forest Products Ltd.

Serge Constantineau
Domtar Forest Products Inc.

Les Cooke
Saskatchewan Environment and
Resource Management

Ian Corrigan
Valon Kone Brunette Ltd.

Denis Cossette
Les Chantiers de Chibougamau Ltée

Gilles Côté
Coopérative Forestière Laterrière

Julie Côté
Séchoirs Côté Inc.

Terry Cunning
Tolko Industries Ltd.

Bastien Deschênes
Boisaco Inc.

Sylvain Deschênes
Groupe G.D.S. Inc.

Roy Dias
Canadian Forest Products Ltd.

Mike Dion
Sundance Forest Products Ltd.

Technical Advisory Committees (continued)

Gary Dolinski Canadian Forest Products Ltd.	Nicol Houde Produits Forestiers Petit Paris Inc.	John McArthur Lytton Lumber Ltd.	Réjeanne Pouliot Quebec Ministry of Natural Resources
Rosaire Dubé Matériaux Blanchet Inc.	Michel Huard Félix Huard Inc.	Keith McGregor Slocan Forest Products Ltd.	Yvan Pouliot Bois Daaquam Inc.
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Gordon Dunwell Tembec Industries Inc.	Keven Huffman Tolko Industries Ltd.	Lois McNabb British Columbia Ministry of Forests	Graeme Rickson TimberWest Forest Limited
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Daniel Ethier Autolog Inc.	Mike Knerr USNR	Christian Meilleur Max Meilleur & Fils Ltée	Jocelyn Rondeau Séchoirs MEC Inc.
Chris Finch Weldwood of Canada Limited	Rob Laishley Weyerhaeuser Company Ltd.	Jean-François Mérette Kruger Inc.	André Rouleau Gestofo Inc.
Gilles Forget Claude Forget Inc.	Phil Laros Weyerhaeuser Company Ltd.	Pat Merz Dunkley Lumber Ltd.	François Rouleau Quebec Ministry of Natural Resources
Germain Fournier P.L.C. Inc.	Thomas Laurenzi Delmshorst Instrument Co.	Barry Mjolsness Spray Lake Sawmills (1980) Ltd.	Jean Roy Norbord Industries Inc./Nexfor Technology
André Friolet Slocan Forest Products Ltd.	Marcel Lauzon Marcel Lauzon Inc.	Pierre-Paul Moisan Éloi Moisan Inc.	Toomas Ruberg Weyerhaeuser Company Ltd.
Denis Gagné Domtar Forest Products Inc.	Donald Lebel Bowater Forest Products Canada Inc.	Ron Mostowich Mostowich Lumber Ltd.	François Saillant Natural Resources Canada (CFS)
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Bernard Gagnon Centre du haute technologie Jonquière Inc.	Richard Lemaire Séchoirs Kingsey Falls Inc.	Muhammed Nazir Newfoundland and Labrador Department of Forest Resources and Agrifoods	Vince Santilli Nova Scotia Department of Natural Resource
Mario Gauthier Gemofo Inc.	Pierre Levasseur Abitibi-Consolidated Inc.	Russell Odendahl Canadian Forest Products Ltd.	Réal Savard Abitibi-Consolidated Inc.
Bernard Giguère Comact Inc.	Ian Lindsay Tolko Industries Ltd.	Gino Ouellet Bois B.S.L. Inc.	Jean-Claude Savoie Groupe Savoie Inc.
Sylvain Gilbert Les Produits Gilbert Inc.	Peter Lister CAE Machinery Ltd.	Luc Palmer Gérard Crête et Fils Inc.	Chris Schischikowsky Vanderwell Contractors (1971) Ltd.
Howard Gray Alberta Sustainable Resource Development	Bill Love Tembec Industries Inc.	Vern Parkstrom Tolko Industries Ltd.	Benoit Schmitt Maibec Industries Inc.
Vincent Grondin Machinerie Lico Inc.	Don MacDonald Wapawekka Lumber Ltd.	Élieude Pelletier Doucet Machineries Inc.	Petr Smetanka J.A. Fontaine & Fils Inc.
Rick Haffner Pope & Talbot Ltd.	Peter MacQuarrie Nova Scotia Department of Natural Resources	Réal Perreault Conception R.P. Inc.	Bob Smith Weyerhaeuser Company Ltd.
Dave Hagen Sehta Forest Products Ltd.	Norbert Maltais Chaleur Sawmills	Donald Perreault Les Séchoirs de l'Est	Alan Smythe Downie Timber Ltd.
Mike Harkies Tolko Industries Ltd.	Stewart Marcoux Domtar Forest Products Inc.	Jan Pesek MPM Engineering Ltd.	Donald Starr Weyerhaeuser Company Ltd.
John Hector Natural Resources Canada (CFS)	Greg Mayden Millar Western Forest Products Ltd.	Bryce Piggot LP Engineered Wood Products Ltd.	Jean St-Laurent Lulumco Inc.
Berry Heinen Boucher Brothers Lumber Ltd.	Blair Mayes Dunkley Lumber Ltd.	Martin Poirier Stella-Jones Inc.	Garrie Stryan Tolko Industries Ltd.
Raymond Horte Buckman Laboratories Ltd.			Ted Szabo Alberta Innovation and Science

Technical Advisory Committees (continued)

Luc Tessier
Groupe For-Min

Jim Thomson
Lignum Ltd.

David Trahan
Abitibi-Consolidated Inc.

Alain Tremblay
Scierie St.-Elzéar

Jean-Paul Tremblay
Scierie Thomas-Louis Tremblay Inc.

Bill Tropper
Tembec Industries Inc.

Germain Turpin
Produits Forestiers Turpin Inc.

Cliff Turtle
Pope & Talbot Ltd.

Gilles Vaillancourt
Bois Oméga Ltée

Gaétan Vallée
Scieries Saguenay Ltée

Bill Van Bergeyk
Federated Co-operatives Limited

Jean-Luc Vigneault
Vexco Inc.

Mike Watson
Tolko Industries Ltd.

Kevin Weston
Weyerhaeuser Company Ltd.

Dwight Wilson
Pope & Talbot Ltd.

Ron Wyer
Bowater Forest Products Canada Inc.

Gary Zecchel
Riverside Forest Products Limited

Building Systems

Chairman
Sylvain Ménard
Distribution Open Joist 2000 Inc.

Vice-Chairman
Helen Griffin
Weyerhaeuser Company Ltd.

Michael Adams
Huntsman International (Canada)
Corporation

Réal Arseneault
Manning Diversified Forest Products Ltd.

Pierre Audet
Boise Cascade AllJoist Ltée

Cliff Baker
Timber Specialties Co.

Nigel Banks
Arch Wood Protection Canada Corp.

François Bélanger
Systech Industries Inc.

Léandre Bélanger
Domtar Forest Products Inc.

Alexandre Caron
Silvachem Inc.

Geneviève Caron
Stella-Jones Inc.

Serge Constantineau
Domtar Forest Products Inc.

Les Cooke
Saskatchewan Environment and Resource
Management

Gilles Côté
Coopérative Forestière Laterrière

John Curt
DURAL, Division of Multibond Inc.

Ralph Dawson
Riverside Forest Products Limited

Guido Deschênes
Groupe G.D.S. Inc.

Guy Deschênes
Boisaco Inc.

Mike Dion
Sundance Forest Products Ltd.

Gordon Dunwell
Tembec Industries Inc.

Lynn Embury-Williams
Canadian Forest Products Ltd.

Jim Farrell
Natural Resources Canada (CFS)

Michel Filion
Les Chantiers de Chibougamau Ltée

Pierre Fortier
Bois de Structure Lee Inc.

Julie Frappier
Les Chantiers de Chibougamau Ltée

Stewart Garden
Canadian Forest Products Ltd.

Jean-Paul Gilbert
Quebec Ministry of Natural Resources

Andrew Go
Norbord Industries Inc./Nexfor Technology

Howard Gray
Alberta Sustainable Resource Development

Noël Grenier
Tembec Industries Inc.

Rick Haffner
Pope & Talbot Ltd.

Conal Hancherow
Buchanan Lumber (a Division of Gordon
Buchanan Enterprise Ltd.)

Peter Heal
Taiga Forest Products Ltd.

Joe Heath
West Fraser Timber Co. Ltd.

Berry Heinen
Boucher Brothers Lumber Ltd.

Bob Jones
Natural Resources Canada (CFS)

Eric Jones
Canadian Wood Council

Kenneth Koo
Jager Building Systems Inc.

Mario Labrie
Romaro Structure Corp.

Yves Laflamme
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Ghislain Lamontagne
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Claude Lamothe
Abitibi-Consolidated Inc.

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Alpa Lumber Inc.

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Luc Palmer
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Serge Pomerleau
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Technical Advisory Committees (continued)

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Quebec Ministry of Natural Resources

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Nathalie Seguin
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Roland Sirois
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Ted Szabo
Alberta Innovation and Science

Gilbert Tardif
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Gino Thériault
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Jim Thomson
Lignum Ltd.

Pierre Toupin
Boise Cascade AllJoist Ltée

Cliff Tuttle
Pope & Talbot Ltd.

John Unger
La Crete Sawmills Ltd.

Terry Upgaard
Slocan Forest Products Ltd.

Bill Van Bergeyk
Federated Co-operatives Limited

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John Walker
Federated Co-operatives Limited

Wesley Wall
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Henry Walther
Canadian Institute of Treated Wood

Darian Wentland
Jager Building Systems Inc.

Craig Wilson
Timber Specialties Co.

Value-added Research

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Peter Beulah
Greenwood Forest Products Ltd.

Kent Fargey
Western Archrib

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Fred Nott
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Dan Price
Tolko Industries Ltd.

François Saillant
Natural Resources Canada (CFS)

Aubrey Salon
Downie Timber Ltd.

Bruce St. John
Weyerhaeuser Company Ltd.

Charles Tardif
Maibec Industries Inc.

Patrice Tardif
Composite Panel Association

André Verville
Uniboard Canada Inc.

At Your Service...

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	Xiang-Ming Wang	E (418) 659-2647
Environment:	Alpha Barry	E (418) 659-2647
Particleboard / MDF:	James Deng	E (418) 659-2647
	Martin Feng	W (604) 222-5707
	Bob Knudson	W (604) 222-5738
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